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Beobachtung der totalen Sonnen-Finsterniss vom 18 (6) *Juli,* 1860, *in Pobes.* Nach den Berichten der einzelnen Theilnehmer zusammengestellt von Otto Struve. Mit 3 Tafeln. (From the *Mém. de l'Acad. de St. Pét.* t. iv. 1861.)

The party from Pulkova who joined the Himalaya Expedition consisted of M. O. Struve, Dr. Winnecke, and the Portuguese Astronomer, Lieut. Oom, and the memoir contains an account of the observations of the Astronomer Royal, the three Pulkova Astronomers, and Herr C. Weiler, at or near Pobes, and of Herr Stenglein at Lodio, a few miles south of Bilbao.

Mémoire sur l'intégration des Equations différentielles relatives au Mouvement des Comètes, établies suivant l'hypothèse de la force répulsive definie par M. Faye, et suivant l'hypothèse d'un Milieu résistant dans l'espace. Par Jean Plana. (*Turin Memoirs,* t. xxi. 1861.)

This memoir, dated 12 Sept. 1861, replaces one with the same title presented to the Turin Academy, 26 May, 1861, the numerical results of which were erroneous, in consequence of an error of transcription in one of the formulæ. The conclusion arrived at is stated to be, that while the hypothesis of M. Faye gives results approaching those observed for the two periodic comets of 1205 days and 2718 days (Encke's and Faye's), a better agreement with the results of observation is obtained by the hypothesis of a resisting medium. The investigation relates exclusively to the motion of the centre of gravity of the comet.

M. Faye's hypothesis, referred to in his paper, *Comptes Rendus,* 4 March, 1861, consists in supposing that there is a repulsive force emanating from the incandescent surface of the Sun, and, like the attractive force, varying as the inverse square of the distance, but which, in consequence of the finite velocity of propagation, acts in a direction inclined to that of the radius vector.

Tabulæ Quantitatum Besselianarum quibus Apparentes Stellarum Positiones in Medias convertuntur, adhibitis Numeris Constantibus Pulcovensibus pro annis 1840 *ad* 1864 *computatæ.* Ed. O. Struve. 8vo. Pet. 1861.

The tables are based on the formulæ and numerical values of the constants of precession, nutation, and aberration, given

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in Peters' well-known work, *Numerus Constans Nutationis*, &c., Pet. 1842.

They contain for the 25 years to which they relate the logarithms of the quantities A, B, C, D, and the quantity τ for 0^h Pulkova sidereal time of each day. The quantity E, which varies very slowly, is given only for the last day of each month. Besides the logarithms of A, B, C, D, there are given, in the cases where the rapid variation of the logarithms renders it necessary for accuracy, the natural values of B, C, D.

Arc du Meridian de 25° 20′ *entre la Danube et la Mer Glaciale, mésuré depuis* 1816 *jusqu'en* 1855. Sous la direction de C. de Tenner, Général d'Infanterie de l'Etat-Major Impérial de Russie, Chr. Hansteen, Directeur du Departement Géographique Royal de Norvège, N. H. Selander, Directeur de l'Observatoire Royal de Stockholm, et F. G. W. Struve, Directeur de l'Observatoire-Central-Nicolas de Russie. Ouvrage composé sur les différens Matériaux et rédigé par F. G. W. Struve. Publié par l'Académie des Sciences en St. Pétersbourg. Tome premier, Opérations géodésiques entre le Danube ét le Golfe de Finlande, St. Pét. 1860. Tome deuxième, Opérations Géodésiques entre le Golfe de Finlande et la Mer Glaciale. St. Pét. 1857. Deux volumes, 4to. avec Atlas de 26 planches.

The introduction to vol. i. contains the general history of this great geodetical undertaking. The total arc, comprised between Fuglenœs, lat. 70° 40′ (near the North Cape), and Staro-Nekrassowka, lat. 45° 20′ (near the mouth of the Danube), is 25° 20′ in latitude. It is composed of 258 principal triangles, with 10 measured bases, not reckoning among the 258 triangles the triangles which effectuate the junction of the bases with the chain of triangles. The distance between the extreme points, measured on the great circle joining them, is 2700 versts = 2880 kilometers = 1552 geographical miles. The Observatory of Dorpat is about half-way between the extreme points, and may be considered as the meridian of the total arc.

The total arc is divided into two principal portions, a southern and a northern arc, meeting at the Island of Hogland in the Gulf of Finland; in fact, the triangles of the two arcs form two distinct series, having a common point at Mäki-Päälys in Hogland, but without any common side connecting the terminal triangles of the two arcs.

There are on the total arc 13 points where the azimuth and latitude have been astronomically determined. The Observatory of Dorpat is the only point the longitude whereof

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